AUGUST 1949

FIREMEN

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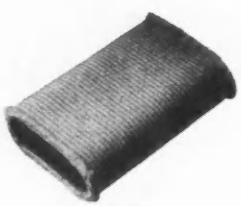

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Firemen

Volume 16 Number 8

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Accounts of fires appearing in FIREMEN *are copies of or extracts from reports forwarded to the Association. This Association, as a body, is not responsible for the statements or opinions of any of its members.*

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THE cover picture (*Wide World*) shows the "skyrocketing" of an exploding 2,000 barrel asphalt tank at an oil refinery in Perth Amboy, N. J. on June 23. The asphalt was "cut back" stock containing considerable naphtha. In this fire, fire fighters were showered with burning asphalt and four died.

This shows the result, in a fire, where the top of a vertical tank is stronger than the bottom and there is no adequate vent for pressure inside the tank. If the top is relatively weak it will let go and vent the pressure, usually without any disastrous consequences. Where the bottom fails first, under pressure, there is the rocket effect shown in the picture.

Compliance with NFPA standards for oil tanks, as given in the Suggested Ordinance on Flammable Liquids, should prevent disasters of this kind. The company owning this refinery generally follows NFPA standards and has a relatively good fire record, but in this case the refinery was an old one, only recently taken over from another company. There was no insurance.

THERE was a time when some fire chiefs were apt to scoff at fire prevention: fires were meant to be fought with stout hearts and hose and ladder. It was difficult for them to see how a Fire Prevention Week poster, a newspaper story or a radio program could fight fire.

But during World War II, fire departments were sadly hampered by antiquated equipment and skeleton crews. Added industry and increased population increased the strain on war-depleted fire facilities. Particularly hard hit were the volunteer companies that were originally set up to combat the usual Spring epidemic of grass and brush fires that found during the war years that their fire services demand had greatly amplified.

It has taken a long time to rehabilitate our depleted fire defenses. In the interim, departments have proven to themselves and the communities they serve the value of fire prevention. A war-time expedient of preventing fires before they happened in community after community proved the wisdom of the battlecry of "Inspect-Detect-Correct."

All this leads up to the fact that soon communities across the nation will be observing Fire Prevention Week during the week of October 9–15 and it's none too early to be making your plans for your Fire Prevention Week observance.

Some fire chiefs say that Fire Prevention Week is a misnomer; that it should be Fire Prevention Year. In theory we agree, for the NFPA, although it is traditional sponsor of the Week, has never been one to urge that departments "put all their eggs in the Fire Prevention Week basket." Fire Prevention Week is not the alpha and omega of fire prevention but it is a springboard from which a community all-year program could spring. Fire Prevention Week offers the fireman a chance to dramatize fire safety in concert with the other communities across the land and in Canada.

We think that we've designed some extremely attractive and useful materials for this year's Fire Prevention Week.

Although we will have nearly twenty campaign pieces for the '49 campaign, we did this purposely so that all departments, no matter what their size, could tailor their purchases of Fire Prevention Week material to fit any size pocketbook.

NFPA members will receive samples of the Fire Prevention week materials and prices with the August *Fire News*. A special publicity packet designed specially for fire department use will be available very shortly with suggested newspaper publicity and radio material for Fire Prevention Week.

As far as promotion of Fire Prevention Week goes, I am a firm believer in making complete plans *early;* the earlier the better. You should decide now on your Fire Prevention Week objectives, in other words determine just what you'd like to accomplish as the result of Fire Prevention Week. Your water pressure may be worrying you, or there may be a need for some new equipment: Fire Prevention Week is an excellent time for you "get the ear" of your neighbors in your community.

I can't emphasize enough the fact that you should maintain constant liason with your citizenry, not only during Fire Prevention Week but throughout the year, using the various available media such as press and radio. The citizens of your community are interested in their fire defenses: and if there are weak points in the fire prevention armor they want to know about it. Fire prevention is now big business. It will pay you big dividends.

We hope that if the NFPA can be of any possible service to you not only in your Fire Prevention Week planning but throughout the year that you will not hesitate to call upon us.

Melvin R. Freeman

Public Relations Manager
National Fire Protection Association

It's not too early to plan for Fire Prevention Week
October 9-15, 1949

Fire Problems of Windowless Buildings

By Anthony J. Mullaney
Chief Fire Marshal, Chicago, Illinois

From an address on "Fire Fighting Problems Due to New Forms of Building Construction" presented to the Building Construction Session of the NFPA Annual Meeting in San Francisco, May 19, 1949

ONE of the most important lessons of fire fighting learned through the years of hard, bitter experience is that the art or science of proper, adequate ventilation, quickly done, is the basis of efficient and successful fire fighting.

Prompt and proper ventilation accomplishes several purposes at once. These are:

1. The building is relieved of accumulated heat, smoke and gases, thereby making entry possible for rescue and fire fighting purposes.
2. The heat, smoke and gases are quickly drawn upward and outward through a selected narrow channel such as a stairwell, elevator shaft or similar pathway, thus preventing the further spread of fire within the building.
3. Explosions of combustible smoke and gases are thereby prevented, eliminating the dread danger of "back-draughts," a notorious killer of fire fighters.

Fire protection specialists, quick to grasp the importance of this lesson, recommended heat actuated vents over theatre stages and stairwells. Large thin glass windows or explosion panels were specified in buildings housing fast-burning or explosive contents or processes. Heat actuated devices are installed to open windows and start exhaust devices and at the same time operate automatic extinguishment systems in case of fire.

Now, at a time when we should be in a position to reap the benefits of these many bitter lessons we are faced with a trend in building construction which, while relatively new, is common in any progressive community regardless of its size. This is a trend to new buildings having completely blank walls and none of the usual window openings and lacking necessary roof ventilation. Older structures in the community also are being remodeled or "modernized" in the same manner.

There may be practical and justifiable reasons for this type of construction. Certain processes require critically controlled conditions of temperature and humidity which is more easily accomplished in a tightly built structure free of heat and cold absorbing glass window panes, or it may be the appeal and comfort that these buildings provide. Buildings of this type require either an adequate mechanical ventilating system or in most cases a complete air conditioning system. This introduces the hazard of smoke, heat and fire being conducted from one building area to another, unless proper dampers are operated by automatic thermal or electric eye smoke detection devices.

This five story fire resistive department store structure erected in 1938, 216 by 256 ft. in area has open stairway and escalator extending from basement to 4th floor. A 200 ton air conditioning unit with heating unit is located on the 4th floor. Forced warm air heating is from low pressure boilers in basement. This building is fully sprinklered with central station supervision. There are three 4-in. standpipe risers with 1½ and 2½-in. connections on each floor. A 50,000 gallon gravity tank and 750 gpm automatic fire pump are provided.

The absence of daylight inside the building requires illumination levels of a greater intensity per unit area. This in turn means heavier electric current leads, larger capacity fuses and associated equipment. In case of fire it is probable that the electric current will be affected or interrupted entirely, plunging the involved area into total darkness on the brightest day unless emergency lighting is provided.

The smoke and gases which accumulate cannot be drawn off through window openings because there are none and since stairwells and other vertical shafts will probably have protective enclosures, firemen will have to enter an area heavily charged with smoke and the gases of incomplete combustion, probably already under the pressures which build up under such conditions. The stage is set for either a pressure explosion or more likely a back-draught type of explosion which takes place when oxygen is permitted to enter a confined fire area.

The interior of a windowless building might become seriously involved by fire before it becomes apparent from the outside. Consider the problem of the firemen going into such a building through the usual stairwells and other entrances under such emergency conditions at the time the occupants are forming a counter stream of traffic in their haste to leave the danger area.

Such fire situations could and have happened in older buildings which have been subjected to "face-lifting" modernization. What are some of the questions that a forward-looking and prepared fire department must ask to find a proper answer? Some of them might be: What is behind the exterior wall? Is the wall solid or just a veneer? How is the veneer attached to the building? Is the material combustible? What are its characteristics when subjected to heat? Is it a masonry veneer which may crack and crumble if a fire stream is played against the outside while the inner surface is heated? Is it a metal veneer? Will it conduct heat into a building if exposed to an outside fire? Will it fail under the heat of fire conditions?

Just because the material is noncombustible is no assurance that it will not be hazardous unless it is used properly under the right conditions. Glass blocks are being used extensively to close former window openings. Experience has shown that such a panel yields readily to usual forcible entry methods except when a metallic window or door frame is set into the center of the glass block panel. This offers considerably more resistance than the usual access panel.

Many windowless buildings having masonry, brick, tile or metal sheathing have no access panels for rescue or emergency fire fighting conditions. Few building codes are modern enough to have kept abreast with this type of tightly-built structure. It seems only reasonable that amendments shall be made to all such building codes to enable any fire depart-

ment to have at least some chance of performing the function of protecting lives and property from fires. Fire protection authorities are in agreement that provision should be made for such access panels and one large city already has written the following into its safety code:

"Fire Department Access Panels: Above the first story or ground floor of a building, fire department access panels shall be provided in every frontage, spaced not more than fifty feet apart on centers horizontally. Each panel shall consist of a fixed sash with a single sheet of flat glass at least thirty-two inches wide and forty-eight inches high and openable from either exterior or interior. Wherever practical, one such panel in each story shall give access to a stairway or, where there is no stairway at the front exterior wall, one such panel in each story shall provide access as close as practicable to a stairway."

WHILE height limitations are not specified in this ordinance, it is reasonable to assume that such panels shall be required in buildings more than two stories in height or having more than two thousand square feet in area on any floor above the ground floor at all levels within reach of fire department ladders either from the ground or from existing adjoining structures. The size of the panels as specified in the above ordinance are minimum and to facilitate rescue and other fire department operations. The dimensions should be increased by at least one foot in height and one foot in width, with a sill height not more than three feet above the floor.

Such panels should be hinged to permit full use of the opening and must have a glass or equally transparent material with wired glass where required elsewhere in the code.

Adequate automatic fire protection facilities such as automatic sprinkler systems, automatic fire detection devices and, in those few special cases where limited special hazards may be permitted, auxiliary protective devices such as exhaust fans, automatic electric current and gas shut-offs should be required so that fires may be detected and extinguished in their incipiency with a minimum risk to life or property within or adjacent to the structure.

The problem of fire protection in buildings of this type is admittedly quite complex and requires considerable careful study of presently existing conditions and also of the trends of use and occupancy in order that adequate regulations can be promulgated and enforced in the interests of fire and safety security. Because of the very limited fire and accident experience in buildings of this type provision should be made for the exercise of reasonable discretionary power by building department and fire department officials in the interpretation and application of such code requirements on new construction and reconstruction or remodeling of older buildings.

Since the seriousness of fire in windowless types of buildings is apparently far greater than in more easily ventilated buildings of conventional construction, it follows that reasonable limitations shall be made of combustible materials within the premises. This shall include not only the furnishings and decorations but should also apply to the contents of a commercial building.

Non-combustible materials should be used in the construction of partition walls, ceilings, false ceilings, flooring, interior trim and other interior parts of the structure. Decorations should be limited in quantity and should be non-combustible or treated for flame resistance. It seems reasonable to regulate the display and storage arrangements of merchandise, including construction shelving, counters and similar fixtures. Not only should there be clear aisles and passageways, but ready access must be available to storage spaces behind false walls and partitions. Where such spaces are extensive or exceed a reasonable volume, automatic fire detection or extinguishment equipment should be required.

Properly protected openings should be made in all concrete floors at reasonable intervals for the efficient use of basement nozzles. Most concrete slab construction is reinforced with steel rods, closely spaced, and is a serious hindrance when such floors must be breached for fire-fighting purposes. Newer panel or radiant types of heating involve the use of

This four story office building of ordinary brick, wooden joisted construction erected in 1893 was enclosed in 1948. The only openings above ground are two 3 by 6 ft. windows leading to outside fire escapes. All ceilings are suspended with concealed spaces containing heating and ventilating ducts. Heating is by forced warm air with oil fired boiler. A 30 ton air conditioning unit is located under basement sidewalk. Fortunately, there is complete protection of vertical openings.

hot water or steam pipes in floor and ceiling slabs. Cutting into one of these pipes may involve a shower of scalding water or a hot steam bath which not only is dangerous but may further contribute to low visibility in the area.

Insulation and acoustical materials applied to the interior of these buildings should be of a type reasonably fire-resistant or which add a minimum to combustible contents. Interior finishes and trim should be of the same or similar material. Some of the newer interior finishes are made of pressed fibrous substances, phenolic fibres, and a variety of other highly combustible plastic materials which are hazardous.

Continued on page 18

This factory building of heavy timber construction was built in 1914 and recently remodeled with all window openings closed with glass block panels. Stairways are enclosed. The building is sprinklered throughout with 30,000 gallon gravity tank supply. A standpipe has 1½ and 2½-in. connections on each floor. The building is air conditioned. Coal fired boilers provide heat by steam and warm air.

Veteran Fire Chiefs Honored

George Wallace at Modesto, Calif.

WHEN Fire Chief George Wallace of Modesto, Calif. (member NFPA) retired on May 19, after 40 years as chief of the Modesto Fire Department the community was determined to give an outstanding demonstration of appreciation for his years of faithful service and leadership. Accordingly, "George Wallace Day" was proclaimed as a local holiday with public schools closed in the chief's honor. At evening, a community banquet with some 600 guests present was held and a new automobile and other gifts were presented to the retiring chief.

Guests at the banquet included a roll call of distinguished citizens of Modesto; fire chiefs headed by Chief William Meinheit, President of the Pacific-Inter Mountain Fire Chiefs Association; General Manager Percy Bugbee, Chief Engineer Horatio Bond, and Warren Kimball of NFPA; and General Manager James E. Jagger of the International Association of Fire Chiefs.

"Uncle Buck" Hallmark of Dublin, Texas

FIRE Chief W. P. Hallmark of Dublin, Texas, was given special recognition at the recent convention of the Texas Firemen's Association at Galveston. In reporting this action to FIREMEN, Texas Fire Prevention Chief Eugene Sanders, writes: "Fire Chief W. P. Hallmark, better known as Uncle Buck is that type of man who represents all those fine things that have made America a great country." A newspaper report states:

"A man who has spent 70 of his 76 years fighting fires sat on the front row of the Buccaneer Hotel's crowded ballroom and nodded vigorous agreement as speakers urged fire prevention education.

"He is W. P. (Uncle Buck) Hallmark, fire chief of Dublin for the past 53 years, a member of its fire department for the past 57, a fire fighter since his father took him, as a 6-year-old boy in Howelton, Ala. along on horseback with him to fight forest fires.

" 'We used to take wet cowhides with us,' recalled Uncle Buck. He is still an active member of the Dublin Volunteer Fire Department, he said, 'and still can climb those ladders and handle a hose.'

"All of his fire fighting work has been gratis. He could however, retire if he would, with a $25 a month pension, as can all volunteer Texas firemen who have served 20 years and reached the age of 55.

" 'I say I'll retire when they haul me out to the cemetery, and I hope to God it will be on a fire truck and not a hearse.' "

Radio Frequency Assignments Established for Fire Service

NEW U. S. Federal Communications Commission allocations of radio frequencies for fire service use became effective July 1, 1949. Fire service radio is covered by Part 10, of the rules and regulations of FCC. Complete details covering fire service radio are published in the Federal Register, Vol. 14, No. 87, dated May 6, 1949, and obtainable from the Superintendent of Documents, Washington, D. C. for 25 cents.

The allocations were assigned after consultation with a radio advisory panel representing various fire service organizations. Well planned and coordinated use of the assigned frequencies is considered important so that maximum efficiency can be obtained. Prefered frequency lists have been prepared to aid in the selection of frequencies which should give the best fire radio performance in each state.

In general, because of freedom from skip and interference characteristics, frequencies in the 152–162 mc band are recommended for general use. Frequencies in the 30–50 mc band should be reserved for users requiring large area coverage, for coordinated coverage, or for rugged or hilly terrain. In addition, frequencies 166.25 and 170.15 mc are assignable to points within 150 miles of New York City to take care of congested conditions caused by the city. There are also frequencies assignable on a shared basis in the 72 mc band on condition that no harmful interference be caused to television reception, and frequencies between 159.51 and 161.79 mc can be shared with the railroad service.

The fire service also has been granted three frequencies for low power walkie talkie sets for fire ground operation. It is suggested that in each state all fire department walkie-talkie sets operate on the same wave length to permit coordination of fire ground operations in mutual aid or disaster operations.

●

New NFPA Specifications on Automobile Fire Apparatus

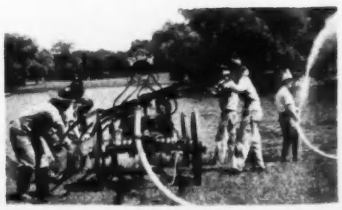
NEW 1949 NFPA Specifications on Automobile Fire Apparatus, recommended by the NFPA Committee on Fire Department Equipment headed by Chief Henry Thomas of Hartford, Conn., were unanimously adopted at the NFPA Annual Meeting in San Francisco. This is the latest revision of standards for automobile apparatus issued by NFPA in 1914 as the first national specification on municipal fire apparatus.

These specifications covering pumpers, aerial ladders, and pumper-ladder combinations (quads) have been issued in a form to facilitate use by cities and towns in obtaining competitive bids from fire equipment manufacturers. Space has been provided on the specification forms to fill in local details and instructions to bidders.

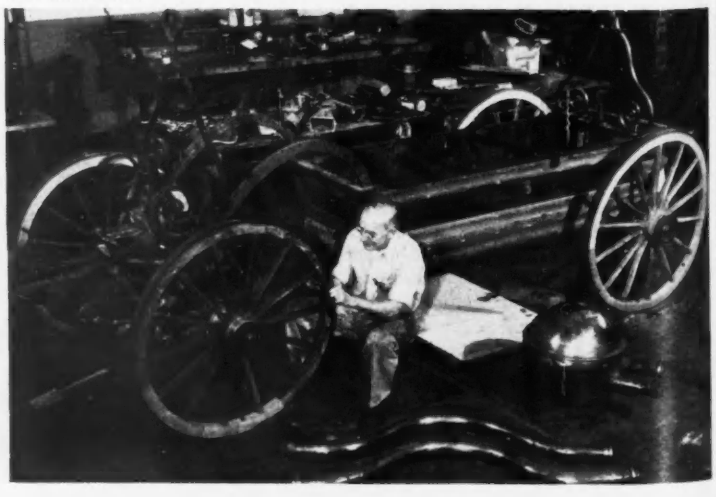
The specifications are available from the NFPA at 75 cents a copy with reduced prices for lots of 12 or more.

Chicago Museum Refurbishes Old Pump

The Chicago Museum of Science and Industry cleaned and rebuilt this hand operated pumper originally constructed in 1855. Below Carlos A. Whitney of the museum staff shown repairing the old machine. Above testing the results of his labors by taking suction from a pond.



Authenticated News



New Techniques in Selling Fire Safety

By Melvin R. Freeman

Address before the Greater Dayton (Ohio) Safety Council

Melvin R. Freeman
Public Relations Manager
National Fire Protection Association

IT has always seemed to me that it's a sad commentary on our times that we have to constantly "sell" people to protect their life and property from fire. But as long as you do have to "sell" fire prevention, you must adopt modern merchandising techniques just like any good salesman.

This means you've got to survey your "market" and use selling points and techniques within the limits of your audience. Selling any intangible like fire prevention is hard because you can't hand your prospect someting for him to handle or see. Instead you've got to appeal to his emotions: but doing it in such a logical manner that your prospect will be convinced of the great dividends in fire safety.

Like all merchandisers you've got to make it easy for people to buy your product "five prevention." That means that you've got to have your service in a convenient place. It means that you've got to use the same "point of sale" technique used by commercial advertisers in having posters prominently displayed both from vantage points and near hazardous operations.

Like any good "salesman," you've got to "package" your product "fire prevention" attractively if you want to sell it. Keep in mind you're still in competition with other drives. Americans just won't be preached at or dictated to, you've got to sugar-coat your fire prevention message. Make it easy for your audience to take: make it dramatic enough to hold their interest and scientifically-planned so that the message will stick.

Like any good salesman, you've got to plan your fire prevention campaign well. Don't just sporadically beat the drum for fire prevention during Fire Prevention Week and then put your program away in mothballs until another Fire Prevention Week rolls around. Plan for a consistent, year-round activity. Make your fire prevention campaign timely: when seasonal hazards come up on the calendar hit your audience hard at the time they're thinking about the hazard. If you are responsible for a large plant or community, weave your fire prevention into the over-all education program skillfully by using every possible meeting or publication. Use imagination and strive for proper timing of your appeals.

As a good salesman of fire prevention you've got to advertise your wares and sales-promote your activity. Publicize your fire prevention program consistently and attractively. Use posters to let your people know about special drives and programs. Use available publications. If there's a public address system, or motion picture projectors, etc., take advantage of these also.

Have a good program of fire safety films every once in a while but vary the tempo at such showings and sandwich in a little entertainment, too.

Think up new ways to dramatize fire prevention: don't be afraid to try something new and don't be afraid of being too theatrical.

When you've done all these things, like any good merchandiser, you can tally up the day's receipts — in terms of fires prevented by comparing your current fire loss with a previous period. And if you've held to these merchandising precepts you'll be surprised at how good a salesman of fire prevention you really are.

UP TO THIS TIME we haven't been doing such a hot job of selling fire prevention. I don't mean to say that some communities, organizations and individuals haven't been doing a good job. They have. But by-and-large the national fire prevention job has been too spotty.

I think the chief trouble with fire preventionists is that they talk to themselves too much. I've heard some wonderful discussions about practical fire prevention at some small committee meetings but these pearls of wisdom never get beyond the four walls of the committee room. By training (usually engineering) a fire preventionist is usually a hard-working conservative. If you go to him, he'll usually do anything he can to help solve your problems.

We have a great number of other appeals in the public interest for disease-prevention, highway safety, etc. Our fire control job now is travelling in pretty fast company with other skillfully planned campaigns and you've got to be good to even assemble your audience, let alone do the educational job you set out to do.

I'm not trying to say that a fire preventionist should make a nuisance out of himself and buttonhole everyone that comes within his range and pour fire control admonitions down the throats of such unwilling victims, but I am pleading for the fire preventionist to climb out of his engineering shell and think about mass-fire-prevention influence.

Naturally, that's not as easy as it sounds. You may think that your job is basically engineering and inspection work: that you're not a teacher, a showman, a newspaperman or a radio genius. And I'm not saying that you have to be, but I do say that everyone concerned with such public-safety projects today has got to have a working knowledge of the requirements of such profession. Perhaps you can't write a newspaper release or do a fire prevention radio script but there are people that can. You've got to think in terms of using these media of education in your community intelligently. Most newspapers and radio stations are anxious to get fire prevention material if the ideas are good. Plan your local media into your program. Talk with your editors and station managers and if the idea is good they can usually supply the writing and producing talent.

OUR APATHY is particularly apparent in our reaction to our disgraceful fire losses. Nearly 40,000 Americans die or are burned severely by fire every year. At the present rate of burning over two million dollars worth of materials go up in smoke each and every day of the year. Every 20 seconds there is a preventable fire in the United States. Our fire record is so bad that America has been dubbed with the uncomplimentary title of "World's No. 1 Firetrap."

Our general fire apathy is complicated by a reverse optimism. Although the fire engine is a familiar sight on our streets, it's always going to the other fellow's house, never ours. We feel that we can subsidize our fire carelessness with insurance.

Continued on page 20

1½-Inch Leader Lines in Detroit

FIRST line attack on fire in Detroit, in general, is made with fog nozzles attached to two 1½-in. leader lines supplied by a 2½-in. pumper line, according to Chief Ninnian C. Higby.

Pumpers in Detroit use a divided hose body as shown on this page with 600 ft. of triple-jacketed 2½-in. hose in each compartment. The divided body makes it possible to lay two lines simultaneously. One of these lines supplies a gated wye to which one 150 ft. 1½-in. line is connected. A 100 ft. double doughnut of 1½-in hose (illustrated) is carried ready to attach to the other side of the wye. A blind cap is carried on the second outlet of the wye to protect the thread. By carrying only one 1½-in. leader line connected to the wye the tendency to tangle the two leader lines is avoided. One of the leader lines carries an Elkhart "Mystery" fog nozzle and the other a Rockwood all-purpose fog-straight stream nozzle. Fog is provided at 80 to 100 lbs. nozzle pressure and pumps operated from about 150 lbs. for the average layouts.

The 2½-in. line in the other compartment carries a 2½-in. nozzle with 1¼-in. solid stream tip. This may be used to knock down large volumes of fire to allow the 1½-in. lines to advance, or may be laid as the back-up line for the 1½-in. leaders. A 2½-in. Elkhart "Mystery" nozzle is also carried.

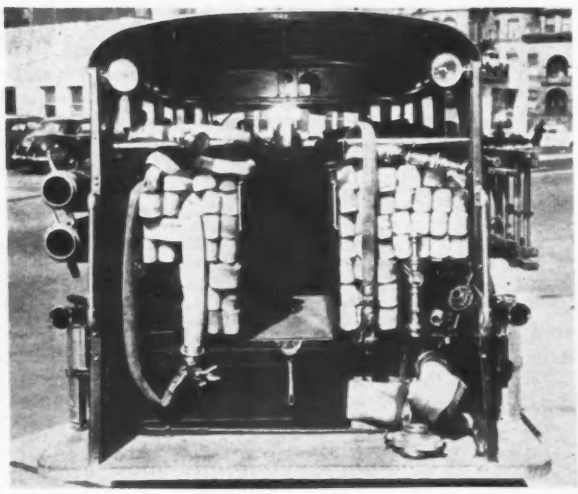
Captain F. J. Heyniger of Engine Co. 5, where these photographs were taken, reported that extensive use is made of the three "All Service" filter type gas masks carried behind the driver's seat of the pumper. This gives protection to the men with the small lines when facing the heat and steam that may be encountered when using fog in confined spaces.

As explained in a previous issue of FIREMEN, the Detroit engine companies do not have to bother with the smaller booster lines. Small line equipment is carried on the ladder trucks. Thus the engine company is not faced with the problem of whether to use the booster line or go to the hydrant. The engine companies devote their full manpower to getting 1½-in. and 2½-in. lines in service and in connecting pumps to hydrants. Also, the ladder truck is spotted in front of the building without interference from the booster-line equipment of a pumper.

In placing the 1½-in. hose in service, the first man drops off with the 150 ft. leader line, carrying a 50 ft. doughnut roll which has a nozzle attached. Where a building is deep the gated wye is taken inside. Or, if the line is hoisted to an upper floor, the wye is hoisted into a window as desirable. The gate is left open on the line that is connected so that the line is charged as soon as the officer calls for water.

Before the pumper goes to a hydrant, sufficient 2½-in. line is dropped off to allow the line to reach any part of the fire area. As the 1½-in. lines are used by first alarm companies, the supply lines are usually short.

It may be noted on the picture showing the back of the apparatus, that the gated wye is carried near the rear step. It has been found that this protects the wye from damage such as might occur if the wye were carried on top of the load and pulled off to the street when laying hose. The 1½-in. nozzles



Rear view of 1000 g.p.m. Seagrave pumper of Engine Company No. 5, Detroit. Divided hose body carries 600 ft. of 2 ½ in. on each side loaded fire to hydrant. Left hand line has gated wye with 150 ft. 1 ½ in. leader line with fog nozzle attached. First 50 ft. of this leader line carried as doughnut roll. Gate is open. Right-hand hose compartment carries 2 ½ in. shut-off nozzle tip threaded to take 1 ½ in. leader line. A double 1 ½ in. doughnut (100 ft.) and with all-purpose nozzle, is carried atop this 2 ½ in. load and may be used attached to the wye or attached to the large nozzle. An extra 1 ½ in. doughnut is carried to extend either line. 1 ½ in. hose was formerly carried in small compartment at left, but it was found that the present method is faster. Tool compartment under right hose body contains various connections for 1 ½ in. hose, including hydrant outlet with 1 ½ in. thread and 2 ½ to 1 ½ reducer.

Typical layout for 1 ½ in. leader lines. First 150 ft. leader line, carried connected, is taken by man at right, shown leading off with 50 ft. doughnut roll. Second man is attaching 100 ft. double doughnut roll to other side of wye. Man at left is connecting 2 ½ in. supply line to pump which is connected to hydrant.

View showing typical hose layout by engine company employing 1 ½ in. fog leader line. Pump is connected to hydrant with soft suction. One man easily handles the 1 ½ in. hose supplied by the 2 ½ in. line. Note that the hydrant is gated to permit a second company to make subsequent connection close to fire.

Making the 100 ft. double doughnut with 1½ in. hose. Roll is started where two 50 ft. sections are coupled by making a sharp bend or fold, as shown at left. Strap is used to hold roll together as shown in view of completed roll at right. This makes a compact unit easily carried which can be placed in service quickly, even in confined spaces. The female coupling is connected to the gated wye. The nozzle is carried attached.

Extending 2½ in. line by connecting 1½ in. hose to tip of nozzle. A 50 ft. doughnut roll is carried for this purpose, giving greater mobility after the large stream has knocked down a serious fire.

displayed in the picture actually are carried attached to the doughnut rolls on top of the 2½-in. hose loads.

Fire company captains in Detroit are given latitude in working out hose load arrangements that will best fit their apparatus and meet their fire service conditions. However, after several years of experience with 1½-in hose, the load illustrated has gained widespread acceptance.

The Detroit Fire Department drill school has a small structure in which fires are built to teach approved techniques of using fog, masks, forcible entry, etc.

The various 1½-in. leader lines and 1½-in. doughnut rolls find many applications in Detroit. The 100 ft. double doughnut of 1½-in. hose is used for inside standpipe service by attaching the 2½-in. to 1½-in. reducer to the standpipe outlet. The 50 ft. doughnut roll is used as wet down line on the 2½-in. hose. Thus the 300 ft. of 1½-in. hose carried on the engine company has a variety of uses.

Atomic Energy and Fire Protection

By EDWARD J. KEHOE

Chief, Safety and Fire Protection Section,
New York Operations Office,
U. S. Atomic Energy Commission

From address before NFPA Annual Meeting, San Francisco, May 19.

THE phenomenon of nuclear fission was first confirmed in the United States in January, 1939, slightly more than ten years ago. Tremendous developments have occurred since then and the extraordinary potentialities of atomic energy have both wartime and peacetime implications. My discussion is concerned with the industrial aspects of atomic energy, particularly as concerns fire protection and not with defensive measures against the fire effects of atomic bombing.

Our office in Washington is assisted by field operations offices located in New York, Chicago, Hanford, Oak Ridge and Santa Fe. These offices are organized on a functual rather than a geographic basis. New York operations includes research, development and production. One of the main functions of our contractor plants is to refine raw uranium ore for use at the plants at Oak Ridge and at Hanford. Both of the latter operations offices produce fissionable materials for the Santa Fe Office which is involved in the development and production of atomic weapons. The Chicago operations office administers Argonne National Laboratory which is located at Chicago and is engaged in research in biology, medicine and the physical sciences. While Oak Ridge, Santa Fe and Hanford involve one or two tremendous physical installations, New York is concerned with many scattered industrial plants and laboratories in many cities.

The New York Health and Safety Branch consists of Industrial Hygiene, Radiological Safety, Sanitary Engineering and Safety and Fire Protection Sections.

In reviewing some of the relatively new and certainly intriguing problems with which we are confronted, I shall in each case review the routine protection and secondly the emergency aspects.

Let us first consider radioactivity. Radioactive materials emit three types of radiation, called alpha, beta and gamma. Alpha is the least penetrating of these three and is completely absorbed by the first fraction of skin surface. Consequently, external alpha exposure can be disregarded. However, alpha emitting materials do present a hazard if ingested or inhaled, since they then come in contact with internal body tissue. While beta is more penetrating than alpha it actually does not penetrate very deeply and the principal danger is that of exposing the entire body to radiation from a relatively strong beta source. Gamma radiation is the most penetrating of these three types and must be guarded against because in sufficient dose, it may affect the skin and the internal blood producing and reproductive organs.

Protection Against Radiation

From the viewpoint of routine protection, employees in our plants are guarded by shielding, remote controls, safety interlocks, medical examinations, radiation surveys and personnel monitoring. Effective shields are provided by utilizing materials with a high density such as lead or concrete. Remote controls take advantage of the fact that radiation diminishes as distance from the source increases. Safety interlocks are provided to prevent exposure to intense sources while "hot" processes are in operation. Medical examinations are given at regular intervals in order to detect the very first indications of overexposure.

Radiation surveys are made of all plant areas using appropriate detection instruments. Ingenious devices have been developed for personnel monitoring such as pocket ionization chambers for measuring gamma, and film badges and rings in which the darkening of film is an

Continued on page 14

New York City Firemen Warn Motorists Parked Near Hydrants

FIREMEN in hundreds of communities are plagued by motorists who park near hydrants obstructing the access of fire apparatus. A thoughtless motorist may reason that there is little likelihood of a fire occurring at that precise spot while his own car is near the hydrant, but general public disregard for the need of keeping hydrants unobstructed can mean disaster in an emergency when lives are at stake.

The Fire Department of the City of New York under Commissioner Frank J. Quayle and Chief of Staff and Operations Frank Murphy, are taking steps to educate the public in the proper respect for the importance of unobstructed fire hydrants.

Fire company inspectors noting cars within 15 ft. of hydrants, place red warning stickers on the windshields. The license numbers are reported to the office of the Chief of Staff and Operations, and the following letter is sent to the offender over the signature of the Fire Commissioner:

"The records of this department indicate that at.....M., on..... 1949, a motor vehicle registered in your name was parked in front of premises ....., within fifteen feet of a fire hydrant in violation of Section 87, Article 6, of the Traffic Regulations of the City of New York.

"Your attention is invited to the seriousness of this apparent inadvertency on your part. In the event of fire in the vicinity there would be considerable delay in maneuvering apparatus and the time lost could result in loss of life and/or serious property damage.

"May I, therefore, request your future cooperation in keeping hydrants always available for Fire Department operations, as a repetition of this action may result in the issuance of a summons for violation of the traffic law."

WARNING

You are obstructing a fire hydrant and endangering the lives and property of others. The law requires fifteen feet of clearance on each side. You may receive a summons next time.

FIRE DEPARTMENT
CITY OF NEW YORK

Facsimile of warning stickers placed on windshields of motor vehicles parked near fire hydrants.

WHILE in general the enforcement of parking regulations is a police function, the use of hydrants is of prime importance to firemen who can do little fire fighting without water and therefore are more apt to notice obstructed hydrants.

New York City fire companies have long carried a "summons book" for use where motorists fail to give right of way to apparatus responding to an alarm.

Form used by fire company inspectors in reporting license numbers of cars parked at hydrants.

To: **Frank Murphy 2, Chief of Staff and Operations**

From: ....., ..., ...**Co. No.**.....

Subject: **Report of License Numbers of Cars Parked at Hydrants.**

Date	Time	Location - In Front of	License Number	Served by

Reports to be forwarded weekly on Mondays.
Negative reports not required.

Respectfully Submitted,

.....

Date: .....19....

.....**Co. No.**..... **Gr. No.**.....

Volunteer Fire Company Section

Membership in the NFPA Volunteer Fire Company Section costs $12.50 per year. This includes 10 subscriptions to FIREMEN. Additional fire fighters may be enrolled to receive FIREMEN at $1.25 each. Other NFPA members will be sent FIREMEN on request.

LAST year when the Association voted to raise the annual dues for Associate Members to $12.50 (including the Volunteer Fire Company Section), the price for extra subscriptions to FIREMEN (in addition to the ten furnished free to members of the Volunteer Fire Company Section) remained at $1.00 per extra man enrolled. This has resulted in some confusion because it cost $1.25 per man per year for the first ten men enrolled in the Section and only $1.00 for additional subscriptions.

Accordingly, starting with membership renewals due in September 1949, the cost of extra subscriptions to FIREMEN will be $1.25 per man. This latter figure has an advantage for member fire departments. Where an additional ten men want to receive FIREMEN it will now cost a fire department no more to take out another NFPA membership and thereby receive an extra set of NFPA publications sent to members including the QUARTERLY, monthly NATIONAL FIRE NEWS, etc. For every ten extra men receiving FIREMEN, the fire company will pay the equivalent of $12.50 dues for an extra NFPA membership at no additional cost.

VOLUNTEER FIRE COMPANY SECTION MEMBERSHIP

($12.50 annual dues) Eligible:

(1) all bona fide volunteer fire organizations in any community.

(2) all fire departments and companies in communities of less than 25,000 population.

(3) all industrial fire brigades.

Member companies receive ten copies of FIREMEN magazine each month, mailed to the homes of individual firemen. Beyond the ten, additional copies of FIREMEN cost $1.25 per year.

Volunteer Fire Company Section members receive at their headquarters, one copy of all publications sent to NFPA individual associate members.

INDIVIDUAL ASSOCIATE MEMBERSHIP

($12.50 annual dues) Eligible:

Individual fire departments, officers, firemen, and others interested in fire safety. NFPA associate members in the fire service receive: one copy of FIREMEN magazine monthly, the NFPA Quarterly, the monthly Fire News, technical standards, popular bulletins and posters.

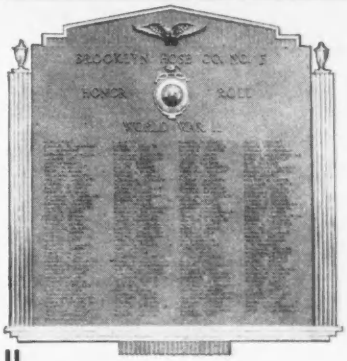
All associate members have one vote in Association affairs.

The Northeast Harbor Fire Company, Inc.

THE Northeast Harbor Fire Co. Inc. (member NFPA) protects a summer resort community located on Mt. Desert Island on the Maine Coast. There are 29 active fire fighters among the 54 members under Chief Lawrence Flye, and two paid engine men. Equipment consists of a 1941, 500 gpm pumper; a 1948 750-gallon tank truck with 500 gpm front mount pump (shown below); a 1926 American La France ladder truck; and a 1938 Packard ambulance with inhalator. According to Secretary Elmer H. Cousins, officers of the four fire departments on the Island are cooperating with officials of Acadia National Park to establish better protection for the island which was the scene of the conflagration which attacked Bar Harbor in 1947. Company officers also are participating in the recently formed Hancock County fire protection organization.

•

Northeast Harbor's 750 gallon tank truck on 110-in. wheel base, cab-over-engine Ford truck, with 500 gpm front mount pump.



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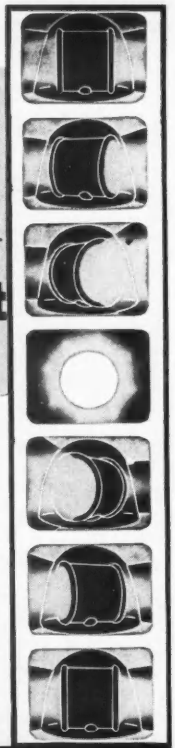
Reliable, longer lasting, due to superior design which has eliminated oscillating parts. Totally enclosed from weather influences—seals working parts from sleet, snow, rain, dust and mud. All moving parts of Beacon Ray are inside.



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Every Midwestern product combines the thoughts and suggestions of practical Fire Chiefs and firemen from every section of the country . . . and every purchaser profits from years of Midwestern research and experience. That is why the famous Mackinaw Coat and other Midwestern clothing have embodied in their design every feature necessary for the protection and comfort of firemen.

In our vast selection of crude rubber materials you will find a type of fabric suitable for your climate and needs. The softness and flexibility in the high-grade materials used are your assurance of long time service and comfort. Many Fire Chiefs are now including Midwestern clothing in their regular yearly budget and by placing your order early you can be assured of this adequate protection when needed.

For complete information have your Midwestern dealer show you our new garments now manufactured from crude rubber compounds. A letter to the factory will also bring you material samples for your inspection.

We now have available: White, Ivory and Brown crude rubber coats for Chiefs, Assistants and other officers; also all sizes short and ¾ length felt lined Firemen's boots for immediate shipment.

NONE GENUINE WITHOUT THIS TRADE MARK

MIDWESTERN MFG. CO. MACKINAW ILLINOIS

Manufacturers of the Famous **MACKINAW Coats**

Atomic Energy and Fire Protection

Continued from page 11

index of beta and gamma exposure. With these various devices, it is possible to determine the radiation dose to any particular employee. This enables us to adjust conditions to keep dosage within conservative tolerance levels. The levels presently in use have been developed as a result of some forty years' experience in the radium and x-ray fields and basic figures were recommended by the National Bureau of Standards and American Standards Association.

Fire Fighting Aspects

Considering the fire fighting aspects of radiation, there should be no great reason for alarm on the part of local fire department personnel who may be called on to assist us. In the first place our scattered "New York" plants and laboratories do not generally involve particularly "hot" radioactive sources. In some locations where we might have fires, radioactivity would not be a factor at all. In other locations where it could enter into the picture, we are equipped to monitor the area with survey meters to indicate intensity of radiation while the fire is in progress and to equip all or some local firemen with film badges. The important thing to remember is that tolerances have been set very low since they are based on a life-time exposure where a worker may be exposed day after day for many years. Individuals such as local firemen who receive a single exposure can take many times the daily tolerance limit without ill effects. After all, each one of us may have been exposed to as much as fifty times the daily tolerance for our workers when we have been given a photo-fluorographic chest x-ray.

We humans have a natural tendency to fear the unknown and some of us may fear radioactivity because it cannot be seen. However, in fire protection we have long been coping rather successfully with many invisible hazards such as electricity, carbon monoxide and flammable vapors.

Uranium Dusts

The dusts and fumes of uranium and some of its compounds present interesting problems in plants and laboratories where such materials are involved. Since they are alpha emitters routine protection requires that healthful atmospheric conditions be maintained both within and without. The process is analyzed to the point where effective control devices may be designed.

In the event of fires in New York operations office plants handling uranium there will be so little such dusts or fumes involved that local firemen will

not need to wear breathing apparatus specifically because of the uranium. The toxicity of uranium is of the general order of that of lead. When we fight a fire in a paint factory we are not unduly concerned about lead poisoning. However, forgetting entirely about our plants for the moment, fire fighting is now fortunately advancing to the point where breathing apparatus is considered as standard equipment for fire fighters and as a matter of good practice should be worn when combating a fire in a uranium plant simply because it is a chemical plant, but not because of the uranium.

The element beryllium is a metal which may be used as a "moderator" to slow down neutrons in nuclear reactions and has been used for some time in various industrial applications such as non-sparking tools. While not radioactive, it is now well accepted as being capable of causing acute and chronic lung disease of a serious nature. (See FIREMEN, April 1949, page 24.) There are only a few major beryllium producing plants in the country. In case of fire, safe plant conditions may be upset since contamination by beryllium may be present to a high degree. As in any highly toxic atmospheres, fire fighters should wear breathing apparatus of the self-contained, demand or demand-work type in high concentrations of beryllium.

The general problem of industrial waste disposal takes on added significance in plants where liquid and solid wastes are radioactive. While wastes contaminated with short "half-life" materials (*i.e.*, the time required to lose half its radioactivity) do not present much of a problem, quite the contrary is true of those with long "half-lives." Such wastes can be stored in remote areas, concentrated and mixed in concrete blocks to be dumped at sea, or disposed of in some other fashion. The possible contamination of ground and surface waters by such phenomenon as rainwater or dilute waste solutions is investigated by collecting and analyzing soil and water samples, and by studying water geology, rates of flow of streams, and so forth. As a result of such a study, measures are devised as a part of routine protection to reduce the degree or chance of contamination again to an extremely conservative tolerance level. The object is to have the contamination so low that waters and soils concerned cannot be distinguished from natural waters and soils. The point to bear in mind relative to operational fire fighting is our desire to keep water runoff to a minimum. This requires effective fire fighting and good salvage operations.

Uranium powder is pyrophoric, is quite active chemically and reacts with nitrogen, carbon, sulphur and the halogens (*i.e.*, any of the negative elements

Of Course He Can Put the Fire Out!
HE HAS AN
INDIAN FIRE PUMP

There's no doubt about the result when this "one man fire department" goes into action. "They are worth their weight in gold". These are some of the praises firemen write us about INDIAN FIRE PUMPS. They are the leading hand extinguishers for fighting Class A fires according to fire departments and foresters. Ask one of these men who have used them. "Water wetting" agents work best in INDIANS and do not harm the tank.

Now is a good time to be sure you are amply supplied with INDIAN FIRE PUMPS. Available with Armco zinc grip steel tanks lined with asphaltic base paint or with solid brass or chrome plated tanks. Send for catalog describing these famous back pack extinguishers.

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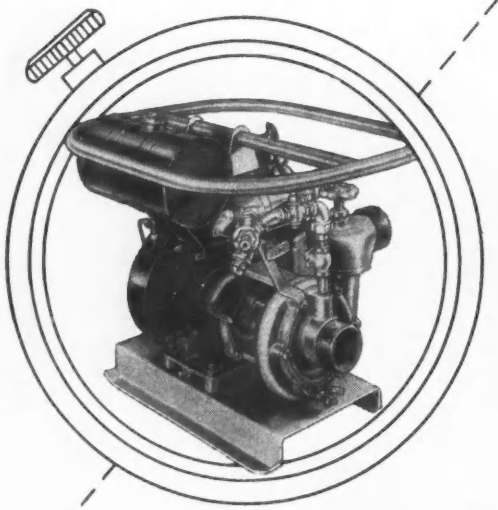

THE compactness of this 3XC booster pump makes it easy to carry on your truck any place.

Delivers 300 GPM to booster tanks. Ideal for pumping out basements—handling dirty water without damage, thus saving wear on your expensive equipment. When connected to booster tank can be used to fight grass fires with truck in motion.

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IT'S A Randolph

Simple, *obvious* operation makes the Randolph really panic-proof—gets it into action *before* the fire spreads—kills fire instantly with a snowy cloud of CO_2! No valves to turn, no nozzles to adjust; just point and press your thumb! Randolph CO_2 is non-damaging, evaporates without a trace. It's non-toxic, won't conduct electricity, deteriorate or freeze.

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Atomic Energy and Fire Protection

Continued from page 15

which form binary salts by direct union with metals) at elevated temperatures. When we describe a material as being pyrophoric we mean that in finely divided form it may ignite spontaneously on exposure to air. Uranium dust clouds must be avoided. If the powders are exposed to the air and ignite, the metal is lost. Such a loss must be avoided if at all possible for obvious reasons.

Some of our processes involve the use of ether. The high volatility, very low boiling point, low autoignition temperature and wide explosive range contribute to the difficulty of extinguishing an ether fire. In order to obtain additional data on the control of such fires, our office conducted tests in the latter part of 1948. In these tests an effort was made to simulate the various types of fires that might be anticipated in the plants concerned, such as leaking packing glands, ruptured piping, discharge from open valves, leaking flanges and so forth. The agents utilized in the tests included carbon dioxide, water fog, carbon tetrachloride, regular liquid foam, alcohol type powdered foam and dry chemical. It was concluded that dry chemical was the most effective agent for ether fires within the range of extinguishers, and that water fog had considerable ability to retard the spread of the fires, and to assist in preventing reflashes.

Fire Fighting Surveys

In accordance with proper practice in the chemical industry, we have developed emergency programs for our major plants and laboratories. These plans include the maintenance of close liaison with the municipal fire chiefs in locations where we are dependent upon the outside fire department. The fire chiefs are contacted and are escorted on a fire fighting survey.

It is obvious after reviewing some of our hazards and materials that fire fighters require guidance in the precautions to be observed in handling them. This accounts for our having invited Mr. Horatio Bond of the National Fire Protection Association and Mr. Frank McAuliffe, president of the International Association of Fire Chiefs to participate in a session on cooperation with municipal fire departments at our Atomic Energy Commission safety conference in Chicago last October. This subject would be incomplete without mention of the valuable assistance received from the Safety and Industrial Health Advisory Board to the Atomic Energy Commission. Mr. Bond handled the fire protection section of the Board's survey and submitted a splendid report.

Continued on page 17

His valuable efforts have assisted in increasing fire prevention and protection by strengthening the Commission and contractor field staffs with fire protection engineers.

In conclusion, I would like to say that even though Atomic Energy will see increasing use in our industrial picture in the coming years, it should not be any cause for alarm on the part of the fire protection engineering profession. Some of the materials we have discussed in this paper present unique problems and yet they are all being handled safely. We who are responsible for safety and fire protection in the Commission are pleased with our safety record and low fire loss ratio and the fact that Oak Ridge has won first place in the National Fire Prevention Week contest two years in a row.

* * *

10th Montana Fire School at Polson

CHIEF CLAYTON BROWN of Polson, Montana, has announced that the 10th Montana State Firemen's School will be held at Polson, Sept. 7–10.

Instructors will include Capt. Herbert L. Olson, Spokane, Washington; Chief Claude Simon, Sand Point, Idaho; R. J. Larrabee, Underwriters Laboratories, Seattle, Wash.; T. J. Rigby, First Aid Instructor, Missoula, Mont.; Fran Holenback, State Fire Instructor, Helena, Mont.

Subjects on the program will include: chemistry of fire, fire causes and hazards, maintenance of apparatus; ventilation, salvage, flammable liquids and gases, rope work, extinguisher practices, gas masks and rescue, inspections, policing the fire zone, care of hose, fire streams, forcible entry, chimney fires, ladder evolutions, hose evolutions, first aid, and hydrants.

FIRE SCHOOLS

Colorado. State Firemen's Fire College and Convention, Idaho Springs, Aug. 25–27.

Florida. Fire College, at Ocala, tentative dates Sept. 5–16.

Indiana. Sixteenth Annual State Fire School, Purdue University, Lafayette, Sept. 27–30.

Maryland. Annual Short Course, College Park, Sept. 6–9.

Missouri. Southeast Missouri Annual Conference, Aug. 9–10.

Montana. Tenth Annual State Firemen's School, Polson, Sept. 7–10.

Ohio. Ohio State Fire School, Fifth Short Course, in Fire Administration, Ohio State University, Columbus, Sept. 6–9.

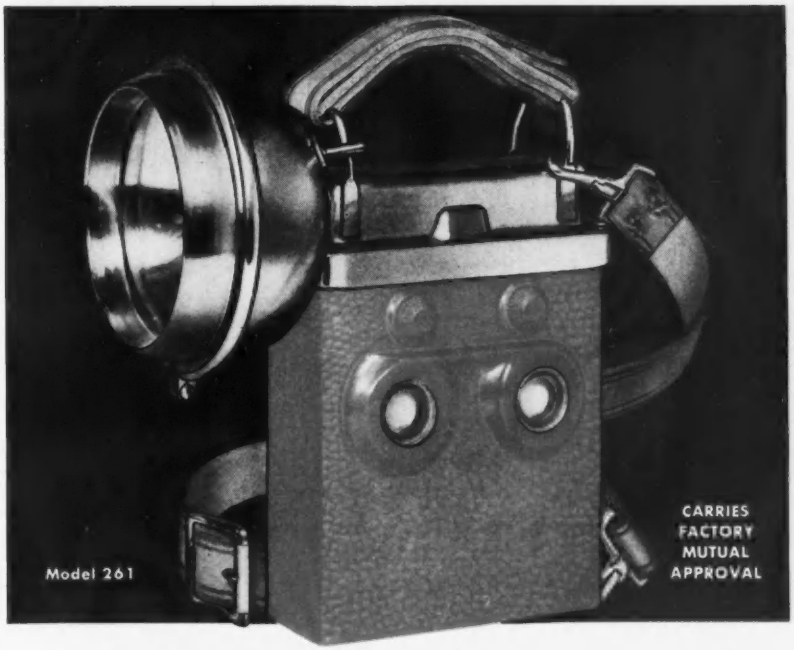
Pennsylvania. Eleventh Annual State Fire School, Lewistown, Aug. 8–12.

Tennessee. Sixth Annual State Fire School, Nashville, Sept. 5–9.

IN DARKNESS, DANGER AND DISASTER

Redesigned to FIRE DEPARTMENT SPECIFICATIONS

WHEAT FIREMAN'S SPOTLIGHT



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Fire Problems of Windowless Buildings

Continued from page 7

Attention should be given to the smoke producing qualities of these materials and whether the products of combustion are harmful or dangerous to human life. This is far more important in buildings wholly dependent upon mechanical ventilation equipment for air changes as such equipment will probably be inoperative because of emergency conditions caused by the fire. In such cases combustion will be incomplete and the toxicity and explosibility of the combustion products will undoubtedly be increased considerably.

Windowless buildings have more vertical ducts and passageways because of the much larger ventilating and air conditioning requirements as compared to conventional structures. Careful attention should be given to the design and installation of such ducts and shafts so that none of the construction materials, including any acoustical treatment will contribute to a fire or aid in its spread.

Typical installation of these systems usually provides separate ducts for each floor, or in the case of very large buildings, there are several ducts for various sections of each floor. All such ducts are usually assembled into one or more vertical shafts which terminate in the ventilating or air conditioning machinery space either at the top floor or basement of the structure. Smoke or hot air drawn into one duct will eventually be recirculated at least in part, to the other portions of the building. This can result in extensive smoke losses unless there is smoke detection equipment properly installed. The ducts can also spread hot gases, sparks or embers from one building section to another unless automatic control devices limit or prevent such action. Since preventive action nearly always includes a complete shut-down of all ventilating or air-conditioning machinery, no fresh air will be brought into the structure. Continuing combustion will soon use up the available supply of oxygen.

This will present two major fire fighting problems. First there will be an accumulation products of incomplete combustion including carbon monoxide, unstable sulphur and nitrogen compounds, smoke tars and other materials. These products are heated by the fire to temperatures higher than their respective ignition temperatures but do not burn because of the lack of oxygen. As soon as oxygen contained in fresh air is admitted, combustion is completed in the form of a typical back-draught explosion with all of its attendant hazards to the occupants, firemen and to the building. The second problem, aside from the explosion danger, is that prac-

tically all such gases are toxic or suffocating in their effect upon the human system. This will require the use of self-contained oxygen breathing equipment by all persons operating in the fire area.

Most fire departments have some self-contained oxygen or fresh-air breathing devices but not in sufficient quantity to equip the number of firemen responding on a box alarm assignment, much less the number responding on a multiple alarm, which undoubtedly would be required to handle a fire under conditions described before.

Access panels, previously discussed, can be used as vents to relieve the fire area of the unburned gases, which will probably ignite explosively at or near the vent openings. Since all ventilating machinery is stopped during the fire it will be necessary for an efficient fire department to have portable venting apparatus such as smoke ejectors, exhaust blowers, compressed air jet type air movers, or similar equipment having sufficient capacity to handle a large volume of air in a relatively short time. Such devices should be set up in openings on the leeward side of the building and placed in operation as soon as water lines are available for advancement into the fire area. Similar access openings on the windward side of the structure should then be opened to speed the clearance of smoke and hot gases as, and when, fire fighting operations will permit such action. This is essentially horizontal ventilation as currently practiced plus mechanical movement of smoke and air for faster operation.

All operations previously described could be carried out only at building heights within reach of fire department ladders. It is imperative that the design and construction of taller buildings will have to include all necessary arrangements, equipments, and devices which will insure the greatest safety to the occupants against fire as well as all other emergency conditions.

Even disregarding the possibility of fire, there remains a serious health and safety problem should power failure or mechanical failure place ventilation equipment of a windowless building such as a large store, out of service while occupied by hundreds of persons.

In conclusion, — it is suggested that the NFPA and other technical agencies should actively seek the cooperation of architects through architectural schools, professional architectural engineering societies, and any other ways possible to stress the importance of designing fire safety into these tightly constructed buildings, rather than waiting for disastrous consequences to force legislation which may be drastic as well as expensive.

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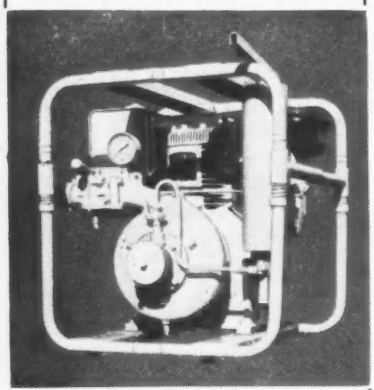

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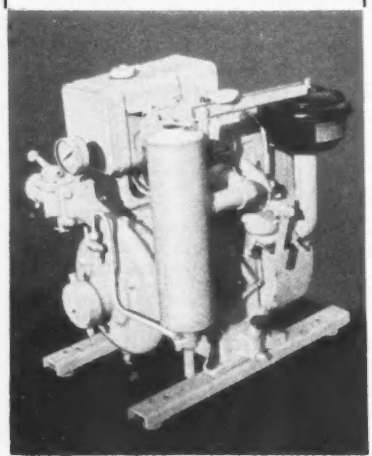

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New Techniques in Selling Fire Safety

Continued from page 9

Our job as fire preventionists is to do something about this dangerous thinking.

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The NFPA contends that not more than 10 percent of all fires are unavoidable; that 90 percent can be prevented by a few simple acts of common sense that are neither expensive nor time-consuming.

This is the major pattern of your job of fire control education.

You have the "ammunition" in form of standards, codes, ordinances, special fire records, general fire statistics, posters, pamphlets, general statistics — even publicity packets, radio scripts, etc., from such fire control organizations as the National Fire Protection Association which I represent. We are always pleased to help you on any fire problem that we can. We have over 300 fire control publications on our current list.

Your job in fire prevention education is to take this ammunition and translate it in terms telling of local significance. We can send out material warning about the threat of fire to the nation, but the average person is little impressed unless you talk to him in terms what fire can mean to him, his family, his home, his job. Talk to him in terms of local fire hazards, of local landmarks, of local problems. The success of our national fire prevention job is dependent on the success of the fire prevention effort at the "grass roots" level.

If I were to attempt a capsule description of your fire prevention job it would be: determine your objectives; evaluate your audiences and decide on the proper techniques of interpretation for each; plan your campaign for consistency and efficiency; use every publicity and educational medium available; be dramatic and vary the tempo of your campaign to suit the moods and interests of your audiences.

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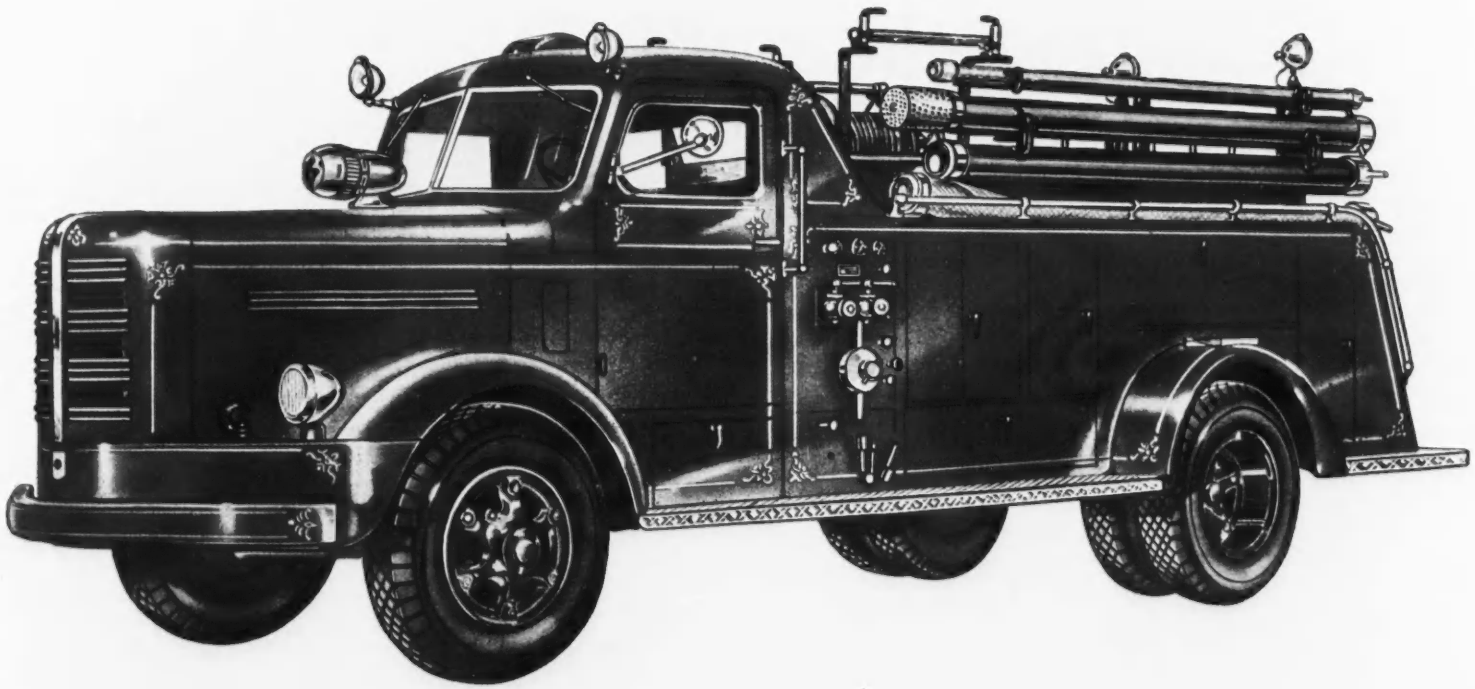

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MANUFACTURERS ANNOUNCEMENTS

Fire Station Design

A SECOND edition of "Fire Station Design" a 36-page publication, prepared and distributed by the Circul-Air Corp., manufacturers of fire hose dryers, has recently been announced. The first edition was distributed to more than 3,000 architects, fire chiefs and fire officials. This second edition contains floor plans, photographs or sketches of 28 recently constructed fire stations. There is a marked trend to one story structures. Plans shown include some having accommodations for public libraries, town halls or community halls in their design. Copies are available from Circul-Air Corp., 575 E. Milwaukee, Detroit 2, Mich.

Fire Hose Catalog Announced by B. F. Goodrich Co.

A NEW six-page catalog section on its line of fire hose for industrial use has been published by the B. F. Goodrich Co., Akron, Ohio. The company offers free copies upon request. The catalog describes in detail the methods and materials with which various types of single and double jacketed and rubber covered fire hose of the company is constructed, and advantages of their use. It pictures each of the brands of industrial fire hose, gives data on size, couplings and test pressures, and weight coupled and uncoupled for 50-foot lengths. Gaskets, fittings and couplings used with the hose are also described.

Fluorescent Emergency Light

THE "Light Watchman," a new safety device that provides instant, automatic light when the regular source of current fails has been announced by the Chatham Products Co., 15 East Runyon St., Newark 5, N. J. When current is restored, the emergency light goes off automatically. The soft, glareless fluorescent light is said to provide approximately ten hours emergency service with standard dry cell batteries. No special wiring is needed, for it plugs into any 115 volt AC outlet. It weighs 9½ pounds and has a convenient carrying handle to facilitate its use as a hand light. Price, including batteries and fluorescent tube is $29.95.

U. S. Rubber Develops Acid Resistant Fire Hose

The United States Rubber Co. has developed a new fire hose resistant to acids, acid fumes, oil and gasoline. The hose is designed primarily for fire protection and general service in acid plants and oil refineries and is constructed with a natural rubber tube, two plies of chemically treated cotton cord fabric, and a neoprene cover. This hose resists 400 pounds per square inch test pressure, and is described as flexible and light in weight. The tube is made by an extrusion process, providing an extremely smooth waterway. The neoprene cover, 5/64 inch thick, gives the hose its high acid and oil resistance. The hose is marketed under the trade name "Matchless Carbolized Fire Hose."

Aviation Bulletins

THE COMMITTEE on Aviation and Airport Fire Protection of the National Fire Protection Association has prepared three Bulletins 6 x 9 in page size. These were tentatively adopted as NFPA standards at Annual Meeting held in San Francisco. They are as follows:

Fire Hazards of Static Electricity in Aircraft Operations and Maintenance. Price: 10c per copy.

Standard Operating Procedures, Aircraft Rescue and Fire Fighting. Price: 25c per copy.

Aircraft Rescue and Fire Fighting Equipment for Airports. Price: 50c per copy.

All three are available from the NFPA Executive Office, 60 Batterymarch St., Boston 10, Mass.

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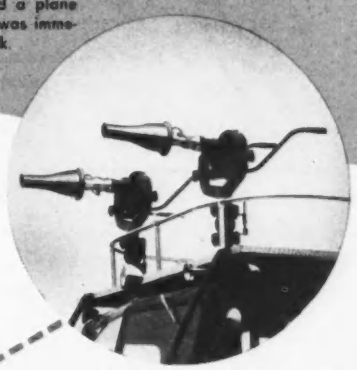

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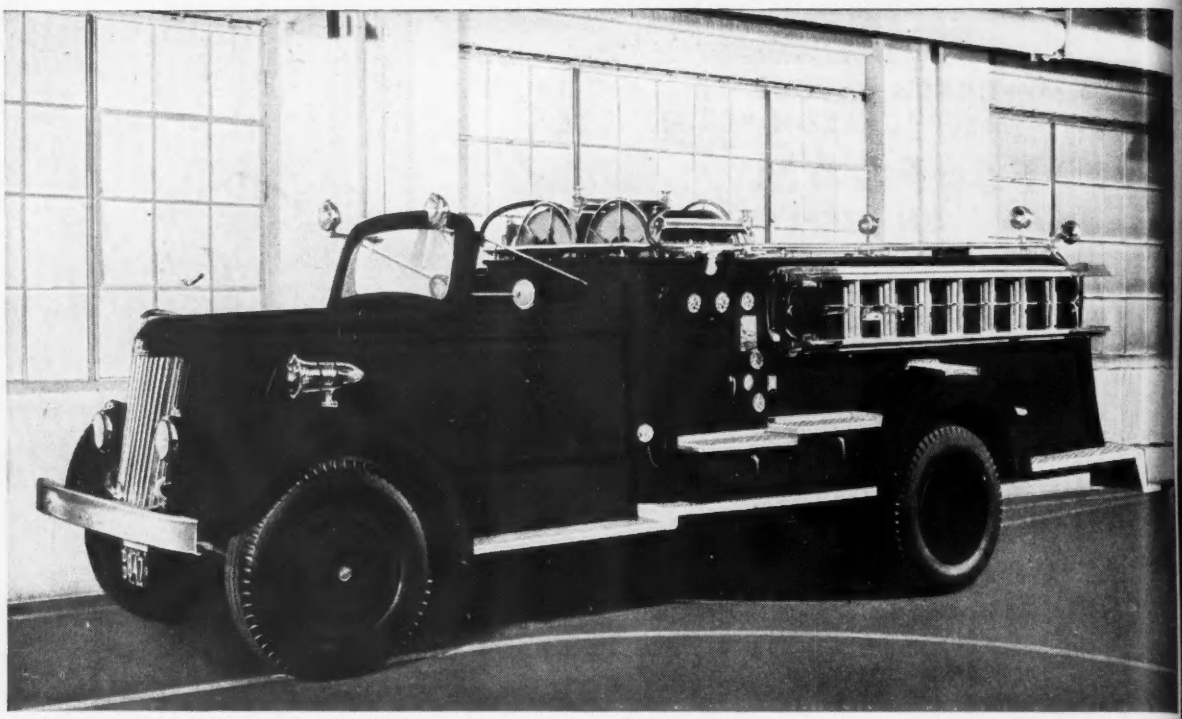

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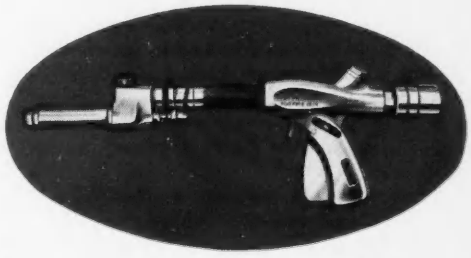

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